



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
441 G STREET, NW
WASHINGTON, DC 20314-1000

REPLY TO
ATTENTION OF

CECW-P

19 June 2012

MEMORANDUM FOR Director, National Deep Draft Navigation Planning Center of Expertise
(DDN-PCX)

SUBJECT: HarborSym Deepening and Associated Tools - Model Certification

1. HarborSym Deepening is a planning-level model developed by the Corps of Engineers to assist in economic analysis of proposed deep draft channel improvements. This model is a complement to the HarborSym Widening, previously certified on 10 June 2011. HarborSym Deepening is a high quality, technically sound, and discrete event Monte Carlo simulation model. It measures the economic effects of modifications to deep draft harbors as overall reductions in transit times, associated changes in total vessel operating costs, and changes in vessel loading or shipping patterns. The model also incorporates calculations for both within harbor and ocean voyage costs through a route group concept. The associated tools are described as follows: (1) The Tide Tool provides information on astronomical tides at tidal stations around the world utilizing the tide prediction engine WTides; (2) The Data Analysis and Pre-Processor (W-DAPP) Tool extracts data collected by the Corps, processes that information, and exports it in the form of a port call list; and (3) The Automatic Identification System (AIS) Data Analysis and Pre-Processor (A-DAPP) Tool provides the capability to visualize, analyze, and synthesize historical AIS data for use in container port channel improvement studies and associated model simulations.

2. Adequate technical reviews have been accomplished and the model and associated tools meet the certification criteria contained in Engineer Circular (EC) 1105-2-412. This certification is based on the decision of the HQUSACE Model Certification Panel which considered the DDNPCX assessment of Version 1.4.8.0 and Kernal Version 1.0.25 of the model.

3. The DDNPCX must monitor future developments to keep the model current with the state of the art and coordinate significant modifications that could affect this certification with HQUSACE. The DDNPCX must ensure that the Economic Production Center and project delivery teams are utilizing the most recent version of the model. This Memorandum will be distributed to the Planning Community of Practice (CoP) and posted on the Planning CoP internet site. It must also be posted on the DDNPCX internet site and the internet site of the model proponent (IWR).

EXPIRES: 30 June 2019

THEODORE A. BROWN, P.E.
Chief, Planning and Policy Division
Directorate of Civil Works